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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FANG MA, KAY NG, NAN LU, and BIN LI

Appeal 2007-3879
Application 10/047,134
Technology Center 2100

Decided: February 29, 2008

Before LANCE LEONARD BARRY, HOWARD B. BLANKENSHIP, and STEPHEN C. SIU, *Administrative Patent Judges*.

SIU, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1-18. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

A. Invention

1The invention at issue involves simulating a financial market (Spec. 1). Investors need ways to improve skills in trading financial assets wisely (*id.* 2). The Appellants' invention simulates a financial market environment that realistically approximates that of an actual financial market (*id.*). The system may be used to test an investor's decision making skills during market fluctuations or educate the investor in trading in a financial market without being impacted by hindsight or emotions (*id.*).

B. Illustrative Claim

Claim 1, which further illustrates the invention, follows:

1. A system for simulating trading of financial assets, comprising:

a computer;

software executing on said computer for displaying a first time interval and a first corresponding price of a plurality of time intervals and corresponding prices, at least some of said plurality of time intervals and corresponding prices being based on historical data;

software executing on said computer for receiving an indication of a decision to trade;

software executing on said computer for simulating the trade;

software executing on said computer for repeatedly displaying a next time interval and a next corresponding price of the plurality of time intervals and corresponding prices;

software executing on said computer for repeatedly receiving indications of decisions to trade based upon said next time interval and said next corresponding price of the plurality of time intervals and corresponding prices; and

software executing on said computer for repeatedly simulating trades based upon said repeatedly received indications of decisions to trade.

C. REJECTION

Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,709,330 ("Klein") and U.S. Patent No. 6,484,151 ("O'Shaughnessy").

II. CLAIM GROUPING

1"When multiple claims subject to the same ground of rejection are argued as a group by the appellant, the Board may select a single claim from the group of claims that are argued together to decide the appeal with respect to the group of claims as to the ground of rejection on the basis of the selected claim alone. Notwithstanding any other provision of this paragraph, the failure of the appellant to separately argue claims which the appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately." 37 C.F.R. § 41.37(c)(1)(vii) (2005).[1]

[1] We cite to the version of the Code of Federal Regulations in effect at the time of the Appeal Brief. The current version includes the same rules.

Appellants argue claims 1-18 as a group (App. Br. 6-13). We select claim 1 as the sole claim on which to decide the appeal of the group.

III. ISSUES

"Rather than reiterate the positions of parties *in toto*, we focus on the issue therebetween." *Ex Parte Filatov*, No. 2006-1160, 2007 WL 1317144, at *2 (BPAI 2007).

The Examiner finds that "Klein discloses the use of historical information on **(col: 5 line: 10-23)**" (Ans. 10) in which a computer displays "a first time interval and a first corresponding price of a plurality of time intervals and corresponding prices **(col.: 7 lines: 48-56, Figure 6 options detail and equity detail)**" (Ans. 7) based on the historical information. The Examiner further cites O'Shaughnessy as disclosing "the use of historical information to simulate stock trades **(col: 3 line: 6-17)**" (Ans. 11).

Appellants dispute the Examiner's conclusion of obviousness of claim 1 and argue that although "the use of historical data for numerous purposes has been known" (App. Br. 9) and "O'Shaughnessy does disclose that historical information is displayed to the investor" (App. Br. 8), "none of Klein, O'Shaughnessy or Applicant's admissions disclose, teach or suggest in any way the use of time intervals and corresponding prices which are based on historical data" (App. Br. 9).

We find the weight of the evidence supports the Examiner's position. As set forth above, the Examiner finds that Klein discloses historical data.

Appellants do not dispute this finding. Therefore, Appellants have failed to demonstrate that Klein does not disclose the disputed claim feature.

Even assuming that Klein does not disclose historical data, we remain unconvinced by Appellants' argument. Appellants do not dispute that Klein discloses a plurality of time intervals and corresponding prices but argue that Klein fails to disclose that such time intervals and corresponding prices "are based on historical data" (App. Br. 7). Similarly, Appellants do not dispute that O'Shaughnessy discloses historical data for use in simulating stock trades but contends that O'Shaughnessy fails to disclose that the historical data forms the basis for "time intervals and corresponding prices" (App. Br. 8). Thus, Appellants argue each reference separately to conclude that neither Klein nor O'Shaughnessy discloses "time intervals and corresponding prices being based on historical data" as recited in claim 1. Appellants fail to provide persuasive reasons why the combination of Klein and O'Shaughnessy fails to teach or suggest the disputed feature of claim 1.

Because the Examiner's rejection of claim 1 is based on the combination of Klein and O'Shaughnessy, rather than only one of Klein or O'Shaughnessy in isolation, the real question is whether the combination of teachings of Klein and O'Shaughnessy renders claim 1 obvious. Appellants have not asserted, let alone demonstrated, that the combination of Klein and O'Shaughnessy fails to disclose or render obvious "time intervals and corresponding prices being based on historical data." One cannot show nonobviousness by attacking references individually where the rejections are

based on combinations of references. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F. 2d 1091, 1097 (Fed. Cir 1986). Therefore, we find Appellants' arguments unpersuasive.

Appellants further argue that "it would not have been obvious to modify Klein to incorporate [historical data]" (App. Br. 10) because the system of "Klein is concerned with providing a game" (App. Br. 11) and is "specifically designed to [so] provide a [such] fun and exciting experience . . . [s]uch would not necessarily be the case if the time intervals and corresponding prices were based on historical data" (App. Br. 11). Therefore, Appellants conclude that "Klein . . . teaches away from such a modification [historical data], since the modification . . . would render Klein unsatisfactory for its intended purpose (i.e., providing a fun and exciting experience in order to keep game players entertained by presenting the player with unexpected and interesting situations) in many instances" (App. Br. 12-13).

We find that Klein discloses an "options market simulator for providing a real-world options trading environment" (col. 2, ll. 18-19). Even assuming that Klein discloses the use of non-historical data in the options market simulator, we do not find, and Appellants do not establish, that Klein criticizes, discredits, or otherwise discourages the use of historical data. Rather, Klein discloses an alternative in which non-historical data may be used. "[T]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternative because such

disclosure does not criticize, discredit, or otherwise discourage the solution claimed . . ." *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

As set forth above, Appellants assert that using historical data in the Klein disclosure would render Klein unsatisfactory for its intended purpose. We find that the intended purpose of Klein is to provide a stock trading simulation environment. We disagree that using historical data or using fictitious data would have a substantial impact on the operation of the stock trading simulation environment of Klein. Appellants argue that using historical data in the Klein system would preclude "providing a fun and exciting experience" (App. Br. 12-13). However, Appellants fail to provide support for the contention that one of ordinary skill in the art would consider a stock simulation environment less "fun and exciting" if historical data were used. "Argument in the brief does not take the place of evidence in the record." *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965) (citing *In re Cole*, 326 F.2d 769, 773 (CCPA 1964).

Even assuming one of ordinary skill in the art would have considered such use of historical data less "fun and exciting," we disagree that this subjective reaction would negatively impact the operation of the stock simulation environment. In view of Appellants' failure to establish a relationship between the use of fictitious or historical data and the operation of the stock simulation environment, we find that the system disclosed by Klein would be as effective as a stock trading simulation environment whether historical or fictitious data were used.

In addition, we find that the "historical data" recited in claim 1 constitutes "non-functional descriptive material" and is not accorded patentable weight. *Functional* descriptive material consists of data structures or computer programs which impart functionality when employed as a computer component. *Non-functional* descriptive material refers to data content that does not exhibit a functional interrelationship with the substrate and does not affect the way the computing processes are performed. *See* MPEP § 2601.01.

When "non functional descriptive material" is recorded or stored in a memory or other medium (i.e., substrate) it is treated as analogous to printed matter cases where what is printed on a substrate bears no functional relationship to the substrate and is given no patentable weight. *See In re Gulack,* 703 F.2d 1381, 1385 (Fed. Cir. 1983) ("Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability. Although the printed matter must be considered, in that situation it may not be entitled to patentable weight."). *See also Ex parte Curry,* 84 USPQ2d 1272 (BPAI 2005) (nonprecedential) (Federal Circuit Appeal No. 2006-1003, *aff'd* Rule 36 Jun. 12, 2006). The Examiner need not give patentable weight to descriptive material absent a new and unobvious functional relationship between the descriptive material and the substrate. *See In re Lowry,* 32 F.3d 1579, 1582-83 (Fed. Cir. 1994); *In re Ngai*, 367 F.3d 1336, 1338 (Fed. Cir. 2004). *See also Ex parte Nehls, http://www.uspto.gov/*

web/offices/dcom/bpai/prec/fd071823.pdf (BPAI Jan. 28, 2008); Ex parte Mathias, 84 USPQ2d 1276 (BPAI 2005) (nonprecedential) (191 Fed.Appx. 959 (Fed. Cir. 2006)).

We find that the "historical data" of claim 1 constitutes non-functional descriptive material. In other words, we find that the steps of receiving an indication of a decision to trade, simulating the trade, displaying a next time interval, repeatedly receiving indications of decisions to trade, and repeatedly simulating trades based upon the repeatedly received indications of decisions to trade do not change their functions based upon the content of the historical data. Because the historical data bears no functional relationship to the substrate (i.e., the storage or cache memory), we accord this claim limitation no patentable weight as non-functional descriptive material.

In the present case, claim 1 recites at least some of the plurality of time intervals and corresponding prices being based on historical data, where the historical data is accorded no patentable weight. Therefore, claim 1 requires no more than at least some of the plurality of time intervals and corresponding prices being based on data. As set forth above, we agree with the Examiner that Klein discloses this feature. Therefore, we are unconvinced by Appellants' argument.

It follows that Appellants have failed to demonstrate that the Examiner erred in rejecting claim 1. Therefore, we affirm the rejection of claim 1 and of claims 2-18, which fall therewith.

III. ORDER

In summary, the rejection of claims 1-18 under § 103(a) is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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